

SMALL FAB

4218



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**RBT18419-9**  
**Job Sheet 178761**



SHIP 7-11

Part No: RBT18419-9

Job Qty: 2 ea

Part Name: Mooring Adapter Assembly Female)



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 6/7/18

Job Tracking No:

Due Date: 7/9/18

Created By: Logan David

Type: SOLD

Description:

Note: DWG RBT18419 Rev.A IPP Rev. A 18.06.07 new issue DP Verify DD

Ship Via:

## Bill of Materials

## Job Routing

| Op No | Operation          | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off     |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|--------------|
|       |                    |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |              |
| 90    | Start up Operation | 2 Ea  | 7/9/18     | 7/9/18   | 0.00      | 0.00    | Start Up Small Fab-2  |           | SM 18-07-13  |
| 110   | Small Fab          | 2 pcs | 7/9/18     | 7/9/18   | 0.00      | 2.00    | Small Fab-3           |           | SAD 18-07-13 |
| 120   | QC                 | 2 pcs | 7/9/18     | 7/9/18   | 0.00      | 0.00    | QC5                   |           | 38           |
| 130   | Packaging          | 2 pcs | 7/9/18     | 7/9/18   | 0.00      | 0.00    | Packaging3-1          | DAS       | 9-89         |
| 140   | QC21-SA            | 2 Ea  | 7/9/18     | 7/9/18   | 0.00      | 0.00    | QC21                  | 53        |              |

Part Op 110 - 1-Assemble as per DWG. See note 8 & 9.  
Descriptions:

9-89

JUL 13 2018

## Job BOM

| Part / Item | Component Name                | Quantity            | Operation             | Container |
|-------------|-------------------------------|---------------------|-----------------------|-----------|
| NAS1756-12  | Remove Before Flight          | 2 Ea (1 ea)         | 90-Start up Operation | 5054659   |
| 3555T51     | Shackle 1/2", 4400 Lbs        | 2 Ea (1 ea)         | 110-Small Fab         | 5063905   |
| 3896T31     | Ferule 1/16 X 3/8" - Aluminum | 4 Ea (2 ea)         | 110-Small Fab         | 5066776   |
| CL-2-C      | Lanyard Wire                  | 1.3320 ft (.666 ea) | 110-Small Fab         | 5026928   |
| RBT18419-5  | Mooring Adapter (Female)      | 2 Ea (1 ea)         | 110-Small Fab         | 5091430   |

## Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | NAS1756-12     | 2        | 367       | 0         |
| 110-Small Fab         | 3555T51        | 2        | 4         | 0         |
|                       | 3896T31        | 4        | 670       | 0         |
|                       | CL-2-C         | 1        | 311       | 0         |
|                       | RBT18419-5     | 2        | 0         | 0         |

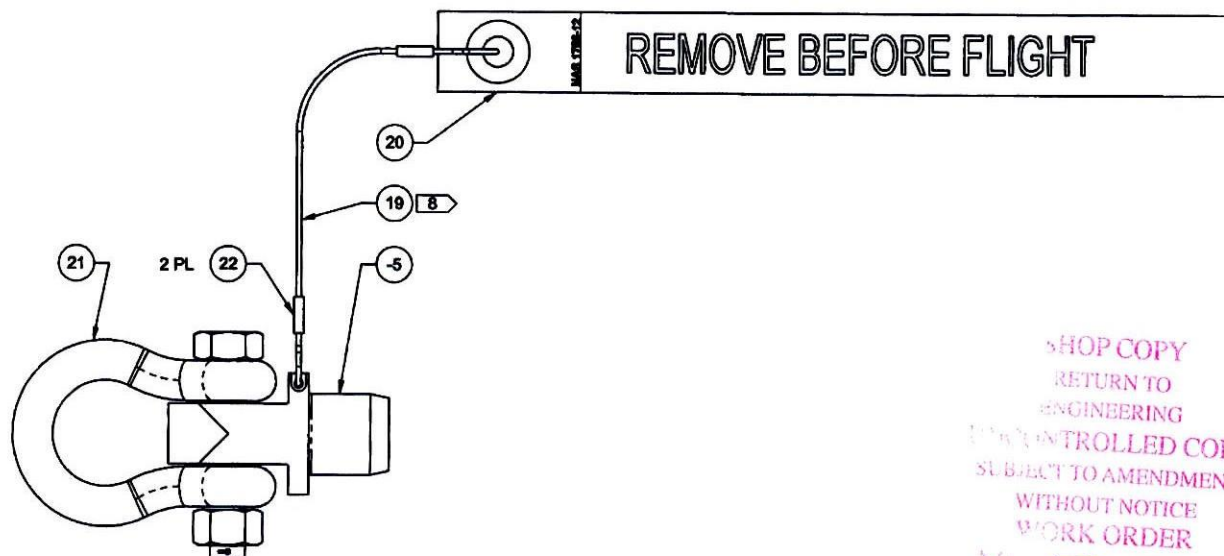
178162

## Part Specifications

Specifications could not be found.

Plex 7/4/18 9:33 AM dart.logan.david

| ITEM # | QTY | PART #           | PART TITLE                                |
|--------|-----|------------------|-------------------------------------------|
| -5     | 1   | RBT18419-5       | MOORING ADAPTER (FEMALE)                  |
| 19     | 1   | CARR-LANE#CL-2-C | NYLON COATED LANYARD                      |
| 20     | 1   | NAS 1758-12      | REMOVE BEFORE FLIGHT TAG                  |
| 21     | 1   | McMaster#3555T51 | SAFETY PIN SHACKLE                        |
| 22     | 2   | McMaster#3896T31 | 1/16" X 3/8" WIRE ROPE COMPRESSION SLEEVE |



**NOTES:**

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X =  $\pm 0.1"$  /  $\pm 1"$   
X.XX =  $\pm 0.01"$  /  $\pm 0.5"$   
X.XXX =  $\pm 0.005"$  /  $\pm 0.1"$   
X.XXXX =  $\pm 0.0005"$  /  $\pm 0.05"$   
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES =  $\pm 0.005"$
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: N/A
- 7) IDENTIFICATION: N/A
- 8) LANYARD LENGTH IS 6.0"  $\pm$  1.0" ONCE CRIMPED
- 9) ASSEMBLE AS SHOWN, INSTALL SHACKLE NUT HAND TIGHT, THEN FOLD OVER COTTER PIN

**RBT18419-9 MOORING ADAPTER ASSY (FEMALE)**

SHOP COPY  
RETURN TO  
ENGINEERING  
CONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 178761  
20180704

|                                                                                                                                                                                                                                                                                 |               |                              |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------|--------------|
| DESIGN                                                                                                                                                                                                                                                                          | KT            | <b>DART AEROSPACE LTD</b>    |              |
| DRAWN                                                                                                                                                                                                                                                                           | KT 03/02/2018 | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED                                                                                                                                                                                                                                                                         | ML 03/08/2018 | TOOL PART #                  | REV. A       |
| MFG. APPR.                                                                                                                                                                                                                                                                      | DP 03/08/2018 | RBT18419                     | SHEET 4 OF 8 |
| APPROVED                                                                                                                                                                                                                                                                        | ML 03/08/2018 | TITLE                        | SCALE        |
| DATE 6/4/2018                                                                                                                                                                                                                                                                   |               | AIRCRAFT MOORING ADAPTER KIT | NTS          |
| COPYRIGHT © 2018 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE LTD. |               |                              |              |

|                           |             |                     |                    |
|---------------------------|-------------|---------------------|--------------------|
| <b>DART AEROSPACE LTD</b> |             | <b>Work Order:</b>  | PK 16              |
| <b>Description:</b>       |             | <b>Part Number:</b> |                    |
| <b>Inspection Dwg:</b>    | <b>Rev:</b> |                     | <b>Page 1 of 1</b> |

**Work Order:**

176761

**Description:****Part Number:**

**Inspection Dwg:**

**Rev:**

Page 1 of 1

# INSPECTION SHEET

[illegible]

## Tolerance

**Actual  
Dimension**

**Accept**

**Reject**

### Method of Inspection

### Comments

|              |  |             |  |               |  |
|--------------|--|-------------|--|---------------|--|
| Measured by: |  | Checked by: |  | QC Inspector: |  |
| Date:        |  | Date:       |  | Date:         |  |

Date:

**Checked by:**

**Date:**

**QC Inspector:**

Date:

|                                                |  |              |  |
|------------------------------------------------|--|--------------|--|
| <b>Engineering Approval:</b><br>(If necessary) |  | <b>Date:</b> |  |
|------------------------------------------------|--|--------------|--|

(If necessary)

Date:

| Rev | Date     | Change    | Revised by | Approved |
|-----|----------|-----------|------------|----------|
| A   | 14.07.31 | New Issue | KJ         |          |

Date \_\_\_\_\_

## Change

## New Issue

Revised by

|    |  |
|----|--|
| KJ |  |
|----|--|

**Approved**



DQA: \_\_\_\_\_ Date: \_\_\_\_\_

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                              |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                              |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Step #: _____                                                                                                                                                                      | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | MRB (QSI042) Approval                        |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                    | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | Completed By                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | Lead hand / Supervisor Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | QC / QA Coordinator Approval                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                              |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>           Environment <input type="checkbox"/><br/>           Design <input type="checkbox"/><br/>           Doc/Data <input type="checkbox"/><br/>           Equip/Tooling <input type="checkbox"/><br/>           Handling/Pre <input type="checkbox"/><br/>           Material <input type="checkbox"/><br/>           Internal Transport <input type="checkbox"/><br/>           Tribal Knowledge <input type="checkbox"/><br/>           LOA <input type="checkbox"/><br/>           Substation <input type="checkbox"/><br/>           Past Expiry Date <input type="checkbox"/><br/>           Misidentified <input type="checkbox"/> </div> <div>           No Re-verification <input type="checkbox"/><br/>           Operator <input type="checkbox"/><br/>           Offset/Setup <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Training <input type="checkbox"/><br/>           Use for Testing <input type="checkbox"/><br/>           Poor Information <input type="checkbox"/><br/>           Rushing <input type="checkbox"/><br/>           Product Improvement <input type="checkbox"/><br/>           Process Improvement <input type="checkbox"/><br/>           Manufacturing Process <input type="checkbox"/><br/>           Past Due <input type="checkbox"/> </div> <div>           Pressure/Forced <input type="checkbox"/><br/>           Bending <input type="checkbox"/><br/>           Centre Not Concentric <input type="checkbox"/><br/>           Cracks <input type="checkbox"/><br/>           Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>           Cuffs <input type="checkbox"/><br/>           Crushing <input type="checkbox"/><br/>           Heat Treat <input type="checkbox"/><br/>           Wave/Twist in Tube <input type="checkbox"/><br/>           Marks/Chatter <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>           Temperature/Cure <input type="checkbox"/><br/>           Set-up <input type="checkbox"/><br/>           BOM/Route <input type="checkbox"/><br/>           Broken/Damage/Defect <input type="checkbox"/><br/>           Inspection Incomplete/Unqualified <input type="checkbox"/><br/>           Contamination <input type="checkbox"/><br/>           Countersink <input type="checkbox"/><br/>           Cut Too Short <input type="checkbox"/><br/>           Instructions Incomplete/Unclear <input type="checkbox"/><br/>           Drill Holes <input type="checkbox"/> </div> <div>           Power Loss/Surge <input type="checkbox"/><br/>           Folio/Program <input type="checkbox"/><br/>           Grain <input type="checkbox"/><br/>           Weld <input type="checkbox"/><br/>           Wrong Stock Pulled <input type="checkbox"/><br/>           Out of Sequence <input type="checkbox"/><br/>           Off-set <input type="checkbox"/><br/>           Misabeled <input type="checkbox"/><br/>           Fit/Function <input type="checkbox"/><br/>           Misaligned/off center <input type="checkbox"/> </div> <div>           Positioned Wrong <input type="checkbox"/><br/>           Outside Dimensions <input type="checkbox"/><br/>           Over/Under tolerance <input type="checkbox"/><br/>           Part Incorrect <input type="checkbox"/><br/>           Part Lost/Missing <input type="checkbox"/><br/>           Part Moved <input type="checkbox"/><br/>           Drawing <input type="checkbox"/><br/>           Finish <input type="checkbox"/><br/>           Misread <input type="checkbox"/><br/>           Turning Sequence <input type="checkbox"/> </div> </div> |  |                                              |  |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                              |  |